

Embedded Softwares for the Internet of Things

SmartSense

Members:

Giovanni Vitiello (Group leader)

Trisha Agrawal

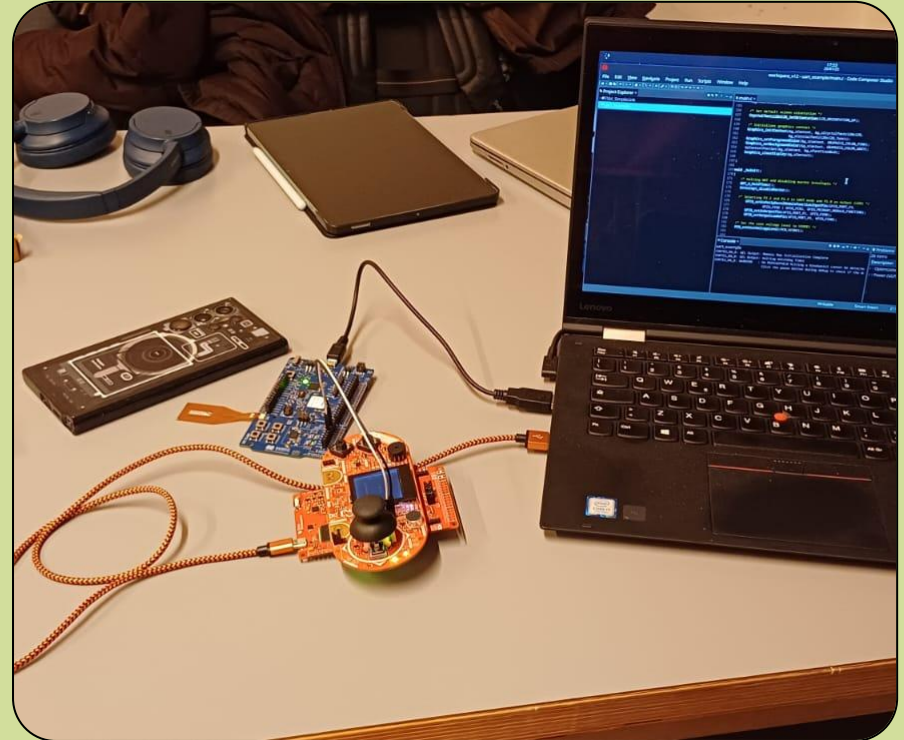
Christian Li Sivertsen

Federico Gasperi

Group number 13

Purpose

- ❖ To monitor air quality, humidity and temperature of environment
- ❖ To promote healthy lifestyle
- ❖ To prevent diseases s.a. flu
- ❖ To keep updates on current state of air

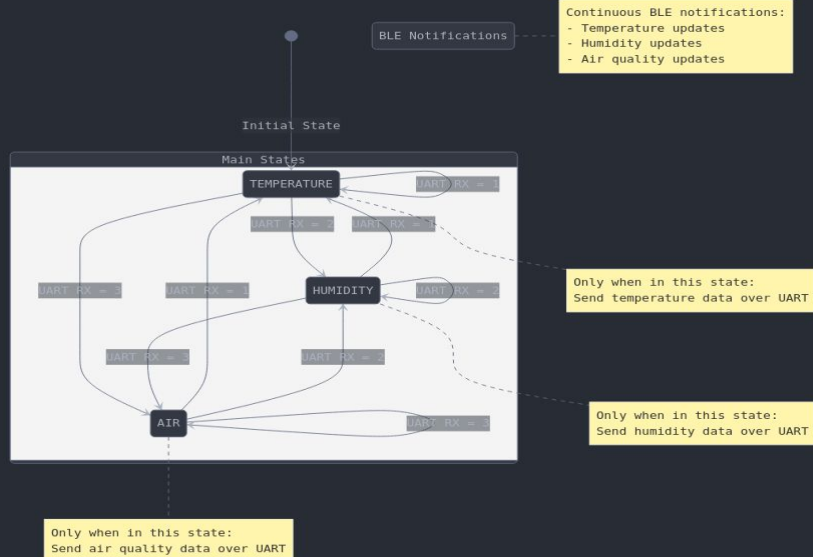


Software Architecture

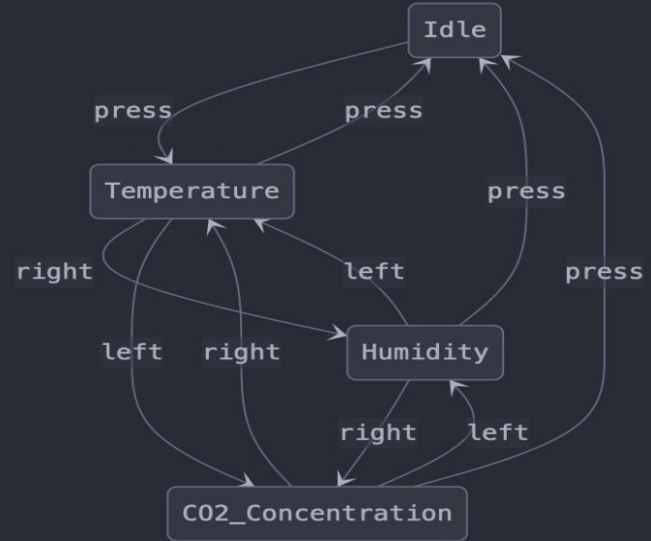
- ❖ Nordicthingy 52 is bluetooth setup
- ❖ Assigning ports to sensor
- ❖ Uses interrupt every time joystick is given a command
- ❖ Sends data
- ❖ Nordic nrf52 requests specific data
- ❖ Processes it and sends to UART ports
- ❖ MSP 324 BoosterPack displays request

Working Scheme

NordicThingy52 and Nordic nrf52



Boosterpack



Future Works

- ❖ Addition of Audio Feedback
 - Making a buzz sound for excessive Carbon Dioxide particles in environment
 - On NordicThingy 52
- ❖ Additional pressure measurements
- ❖ And many more...

Member Contribution

Trisha Agrawal

- ❖ Testing
- ❖ ReadMe (GitHub)
- ❖ Project Presentation Slides
- ❖ Project Presentation Video

Christian Li Sivertsen

- ❖ Finite State Machine
- ❖ Joystick
- ❖ Graphics

Giovanni Vitiello

- ❖ Bluetooth

Federico Gasperi

- ❖ UART

Thank You

Breathe fresh, be ahead